

CLAIMS

What is claimed is:

1. A drive axle assembly comprising:
 - an axle housing;
 - an axle shaft supported at least partially within said axle housing;
 - a driven shaft supported at least partially within said housing transverse to said axle shafts;
 - a gear assembly disposed within said housing coupling said axle and driven shafts;
 - a bearing assembly supporting said driven shaft in said housing;
 - a seal interposed between said driven shaft and said housing adjacent to said bearing assembly separating said housing into first and second cavities with said bearing assembly and said gear assembly respectively disposed therein;
 - a first lubricant in said first cavity lubricating said bearing assembly; and
 - a second lubricant different than said first lubricant in said second cavity lubricating said gear assembly.
2. The drive axle assembly according to claim 1, wherein said axle housing includes a main housing portion supporting said axle shaft and a bearing cage secured to, or integral with, said main housing portion supporting said driven shaft.
3. The drive axle assembly according to claim 2, wherein said bearing cage is a pinion bearing cage.

4. The drive axle assembly according to claim 2, wherein said bearing cage is a through shaft bearing cage.

5. The drive axle assembly according to claim 2, wherein said bearing cage is an input bearing cage.

6. The drive axle assembly according to claim 2, wherein said seal is interposed between cage and said driven shaft.

7. The drive axle assembly according to claim 6, wherein said bearing assembly includes a cup affixed to said cage and a cone affixed to said shaft with rolling elements arranged between said cup and said cone, said seal interposed between said cage and said cone.

8. The drive axle assembly according to claim 1, wherein said second lubricant includes a GL5 additive.

9. The drive axle assembly according to claim 1, further including coaxial axle shafts, wherein said gear assembly includes a differential connecting said axle shafts and said driven shaft to permit relative rotation between said axle shafts.

10. The drive axle assembly according to claim 1, further including a second seal interposed between said driven shaft and said housing adjacent said bearing assembly opposite said seal.

11. A drive axle bearing cage assembly comprising:

a bearing cage;

a driven shaft supported by said bearing cage having a yoke at one end;

a bearing assembly supporting said driven shaft in said bearing cage between said yoke and said pinion;

a first seal interposed between said driven shaft and said bearing cage adjacent to said yoke;

a second seal interposed between said driven shaft and said bearing cage adjacent to said pinion.

12. The drive axle bearing cage assembly according to claim 11, wherein said seal is interposed between cage and said driven shaft.

13. The drive axle bearing cage assembly according to claim 12, wherein said bearing assembly includes a cup affixed to said cage and a cone affixed to said shaft with rolling elements arranged between said cup and said cone, said seal interposed between said cage and said cone.